WHAT IS CLAIMED IS:

1. A method of quoting an insurance product, the method comprising:
   defining an actuary-manipulable representation of a rating model, the actuary-manipulable representation including variables, factor tables and calculation sequences of the rating model;
   from the actuary-manipulable representation, preparing an executable representation thereof; and
   executing the executable representation to calculate a quote for the insurance product.

2. The method of claim 1, wherein the rating model defining includes:
   defining the variables;
   defining the factor tables with one or more axes bound to respective ones of the variables; and
   defining the calculation sequences in terms of steps operative on values of the variables and cells of the factor tables.

3. The method of claim 1,
   wherein the rating model defining is performed in accordance with a predefined document type definition.

4. The method of claim 1,
   wherein the executable representation preparation includes compilation of the actuary-manipulable representation to a platform independent executable form.

5. The method of claim 1, wherein the executable representation includes:
   predefined input and output interfaces;
   a runtime lookup facility for identification of runtime identifiers in the executable representation corresponding to ones of the variables; and
   a calculate method of the compiled rating model executable to generate the quote based on inputs supplied via the input interface.

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1   6. The method of claim 5, further comprising:

2   employing the runtime lookup facility to identify particular runtime identifiers

3   corresponding to particular variables;

4   setting values for the particular variables using the corresponding runtime

5   identifiers and the predefined input interface; and

6   retrieving the quote via the predefined output interface.

1   7. The method of claim 1,

2   wherein the actuary-manipulable representation includes markup language

3   encoded metadata.

1   8. The method of claim 1,

2   wherein the actuary-manipulable representation is XML encoded.

1   9. The method of claim 1,

2   wherein the actuary-manipulable representation includes a graphical user

3   interface presentation of the variables, factor tables and computational

4   flows of the rating model based on markup language encoded

5   metadata.

1   10. A method of preparing an executable representation of a rating model, the

2   method comprising:

3   defining an actuary-manipulable representation of a rating model, the actuary-

4   manipulable representation including variables, factor tables and

5   calculation sequences of the rating model, the factor tables having one

6   or more axes bound to respective ones of the variables and the

7   calculation sequences defined in terms of steps operative on values of

8   the variables and cells of the factor tables;

9   transforming the actuary-manipulable representation to the executable

10   representation, the executable representation including a runtime

11   lookup facility for identification of runtime identifiers in the

12   executable representation corresponding to ones of the variables and a

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13   calculate method executable to generate a quote based on inputs

14   supplied via a predefined input interface.

1   11. The method of claim 10, wherein, for a particular calculation sequence of

2   the actuary-manipulable representation, the transforming includes:

3   decomposing the particular calculation sequence into layers, each layer

4   including those steps thereof that are at a same flow control level;

5   for each layer, traversing the steps thereof to identify those of the variables

6   used by the layer;

7   for each layer, traversing the calculation sequence to identify the steps of the

8   layer targeted by other steps of the calculation sequence and emitting

9   code allocating storage for results of the targeted steps; and

10   for each layer, emitting code for variable test and index calculations of the

11   layer.

12   12. The method of claim 10, wherein the transforming includes:

13   emitting, for a particular calculation sequence, both logged and non-logged

14   versions of the executable representation.

1   13. The method of claim 10,

2   wherein the transforming includes a two-step compilation,

3   a first step thereof producing a platform independent source form from the

4   actuary-manipulable representation, and

5   a second step thereof producing the executable representation from the

6   platform independent source form.

1   14. The method of claim 10,

2   wherein the runtime lookup facility of the executable representation includes a

3   predefined interface for obtaining the runtime identifiers corresponding

4   to respective ones of the variables and factor tables of the rating model;

5   and

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6 wherein the runtime identifiers allow client code to set and access runtime
7 storage corresponding to respective ones of the variables and factor
8 tables.

1 15. The method of claim 14,
2 wherein the client code is part of a networked information service; and
3 wherein the executable representation of the rating model is employed to
4 prepare a quote for presentation by the networked information service.

1 16. A rating model definition environment comprising:
2 a graphical user interface for definition of a markup language encoded
3 representation of variables, factor tables and computational flows of a
4 rating model;
5 the graphical user interface allowing a user thereof to bind one or more axes of
6 individual factor tables to respective ones of the variables;
7 the graphical user interface further allowing the user thereof to define
8 calculation sequences in terms of steps operative on values of the
9 variables and cells of the factor tables; and
10 a compiler for transformation the markup language encoded representation of
11 the rating model into an executable form thereof.

1 17. The rating model definition environment of claim 16,
2 wherein the compiler emits lookup methods for runtime identification of
3 identifiers corresponding to variables.

1 18. The rating model definition environment of claim 16,
2 wherein the markup language encoded representation includes XML encoded
3 metadata;
4 wherein the compiler emits Java source; and
5 wherein the transformation includes further compilation of the Java source.

1 19. A computer program product comprising:
2 a compiled rating model corresponding to a calculation base including
3 variables, factor tables and calculation sequences thereof, wherein one

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4   or more axes of the factor tables are bound to respective ones of the

5   variables, and wherein the calculation sequences are defined in terms

6   of steps operative on values of the variables and cells of the factor

7   tables;

8   a lookup facility to identify runtime identifiers corresponding to runtime

9   instances of the variables;

10   an input interface including access methods for setting values for the runtime

11   instances of the variables using the corresponding runtime identifiers;

12   and

13   a calculate method of the compiled rating model executable to generate result

14   of the calculation sequences based on the set values.

1   20. The computer program product of claim 19,

2   wherein the runtime identifiers allow client code to employ the compiled

3   rating model without knowledge of internals thereof.

1   21. The computer program product of claim 20,

2   wherein the client code is a component of a networked information service;

3   and

4   wherein the networked information service sets values for the runtime

5   instances of the variables and invokes the calculate method of the

6   compiled rating model to generate a quote based thereon.

1   22. An apparatus comprising:

2   means for defining calculation base including variables, factor tables and

3   calculation sequences thereof, wherein one or more axes of the factor

4   tables are bound to respective ones of the variables, and wherein the

5   calculation sequences are defined in terms of steps operative on values

6   of the variables and cells of the factor tables; and

7   means for preparing from the actuary-manipulable representation an

8   executable representation thereof.

1   23. The apparatus of claim 22,

2   wherein the means for preparing includes means for compiling the actuary-

3   manipulable representation; and

4   wherein the actuary-manipulable representation includes means for obtaining

5   runtime identifiers corresponding to at least the variables and factor

6   tables.